FIG. 1A
(PRIOR ART)

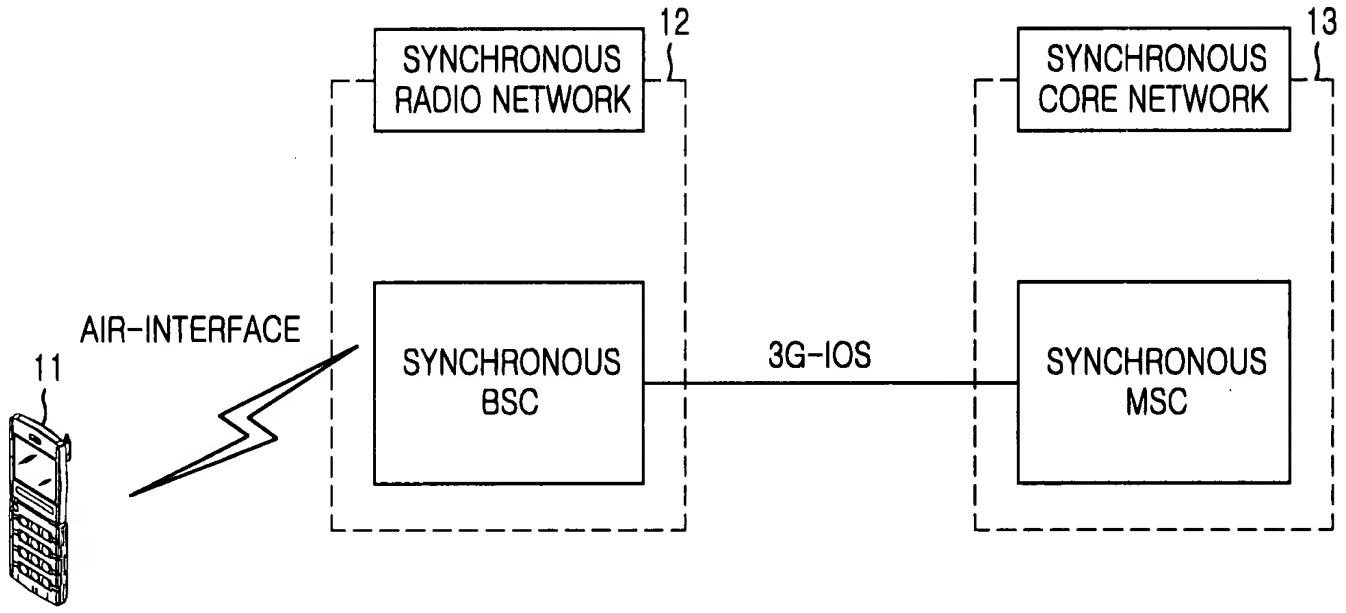

FIG. 1B
(PRIOR ART)

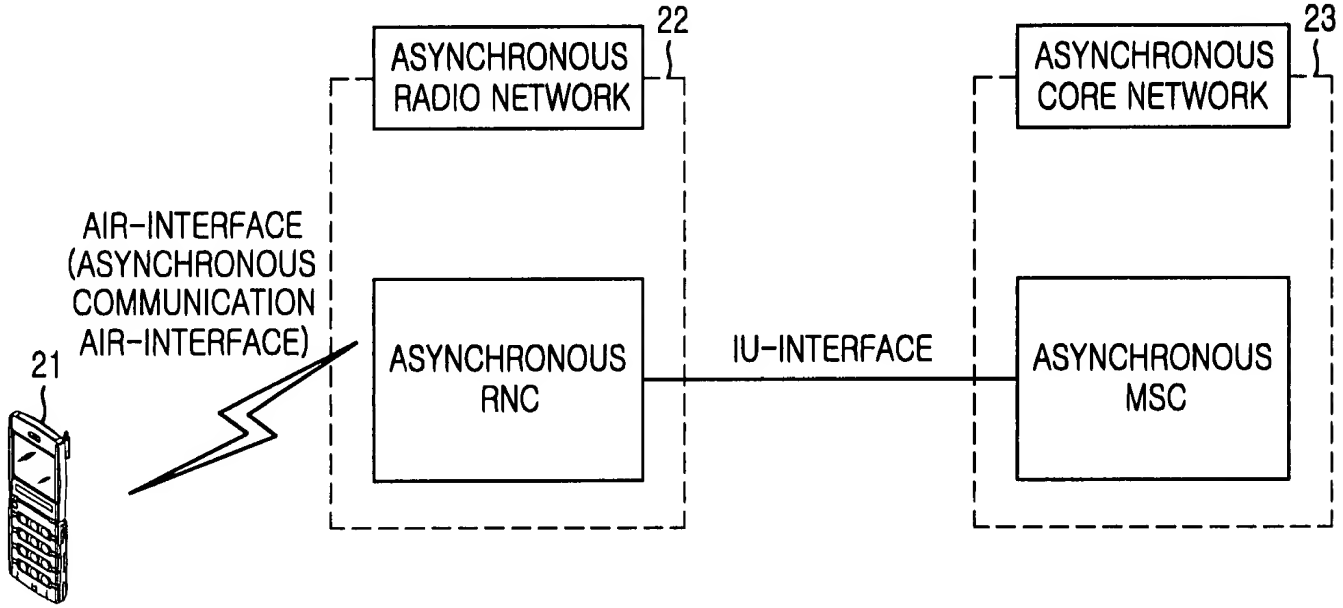

FIG. 2A
(PRIOR ART)

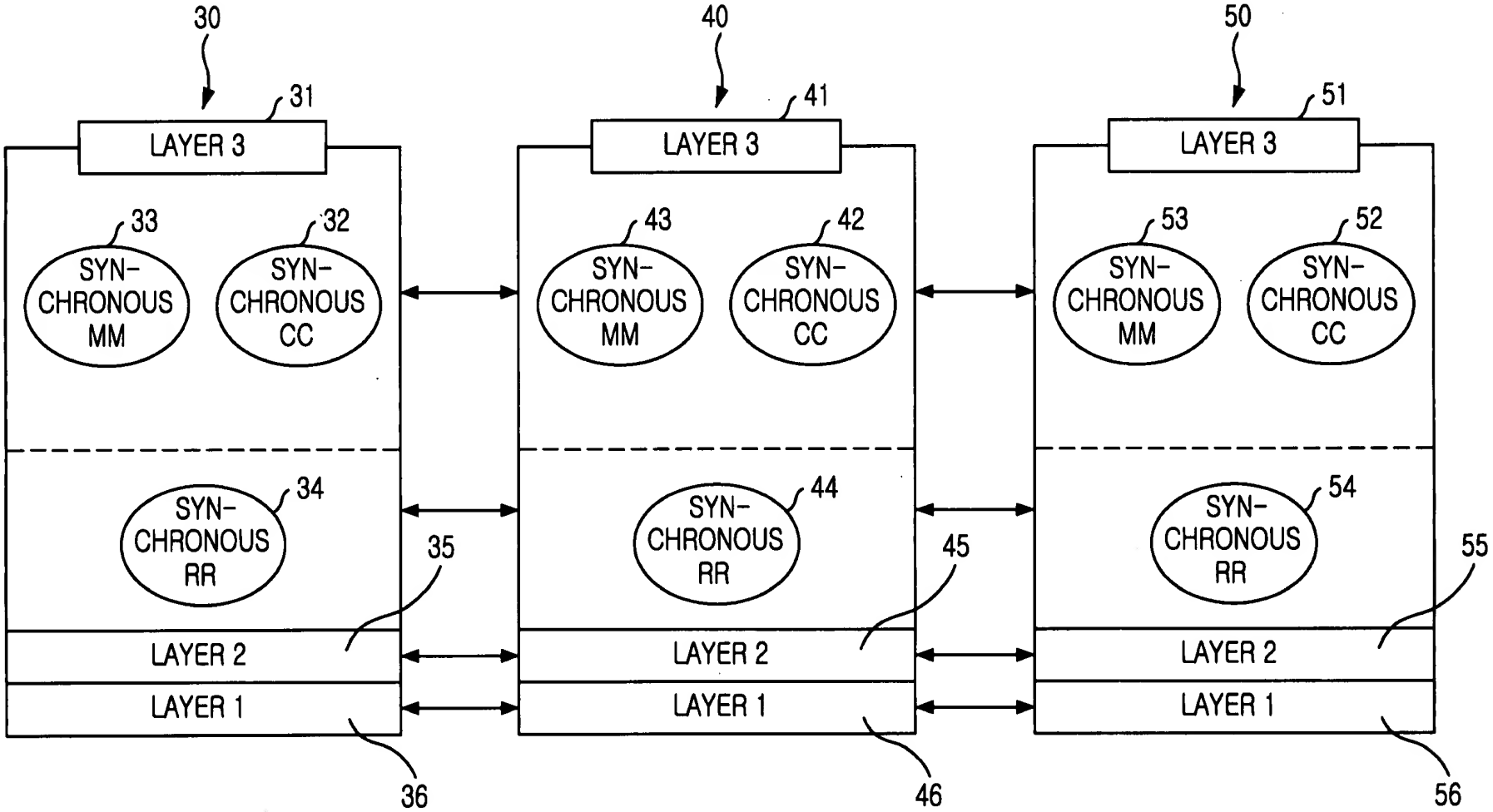

FIG. 2B
(PRIOR ART)

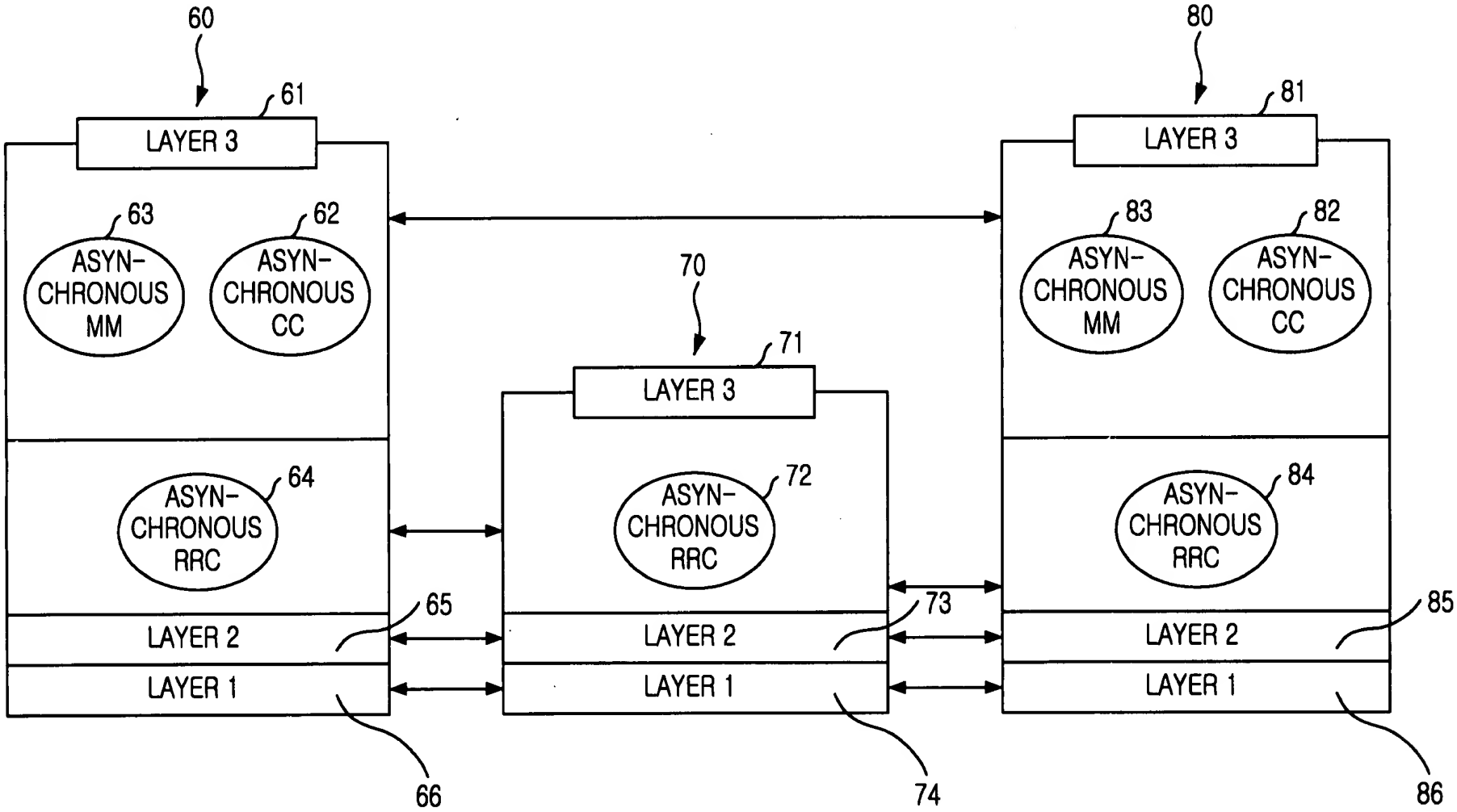

FIG. 3A

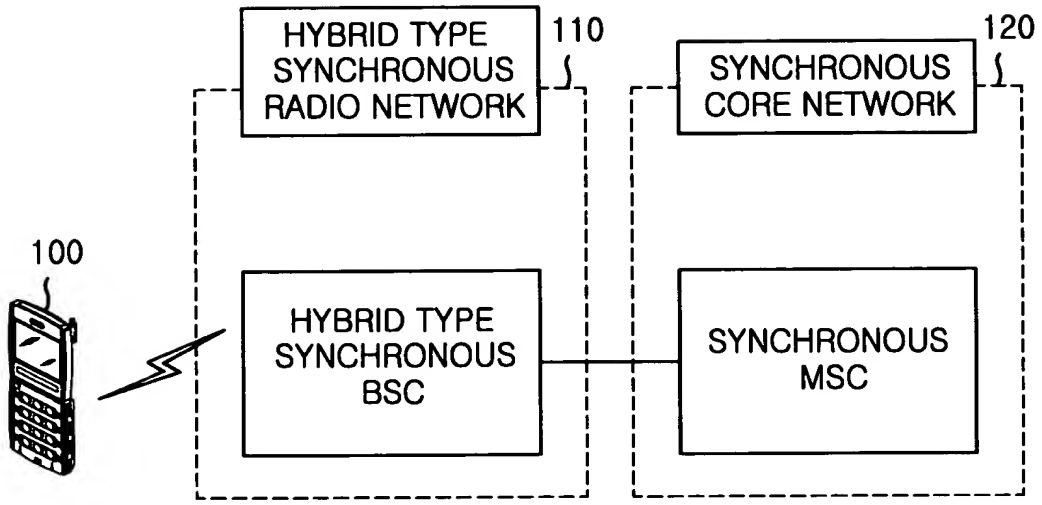

FIG. 3B

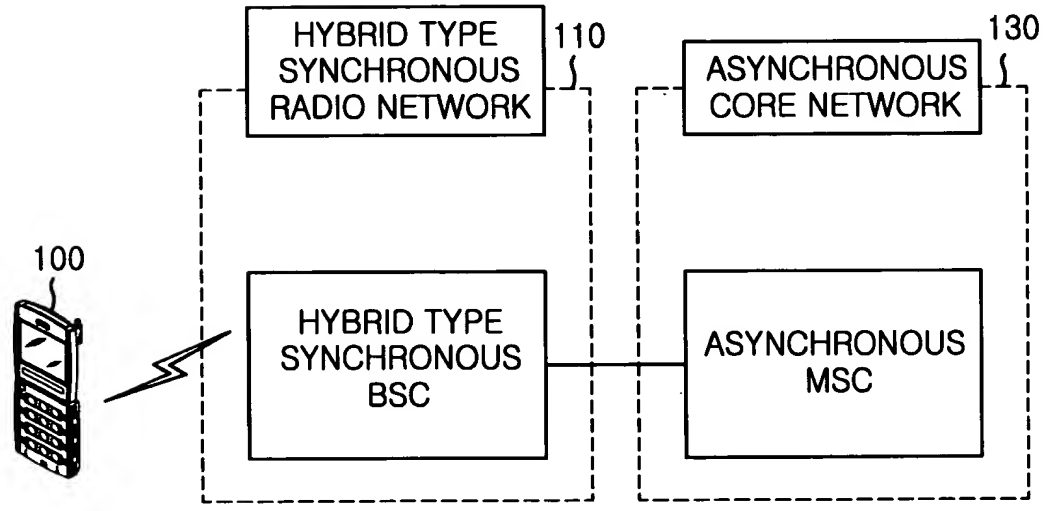

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FIG. 3C

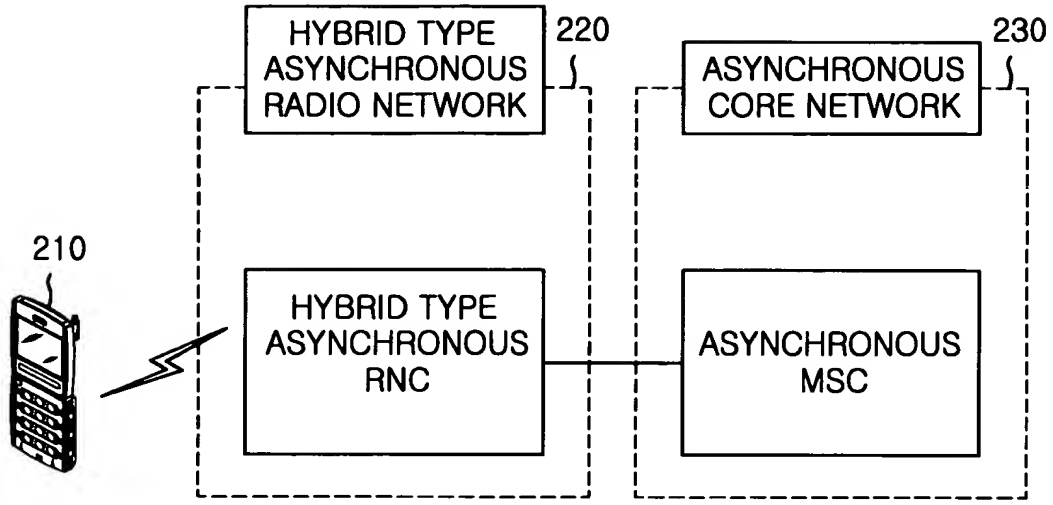
HYBRID TYPE ASYNCHRONOUS RADIO NETWORK
220
ASYNCHRONOUS CORE NETWORK
230
210
HYBRID TYPE ASYNCHRONOUS RNC
ASYNCHRONOUS MSC

FIG. 3D

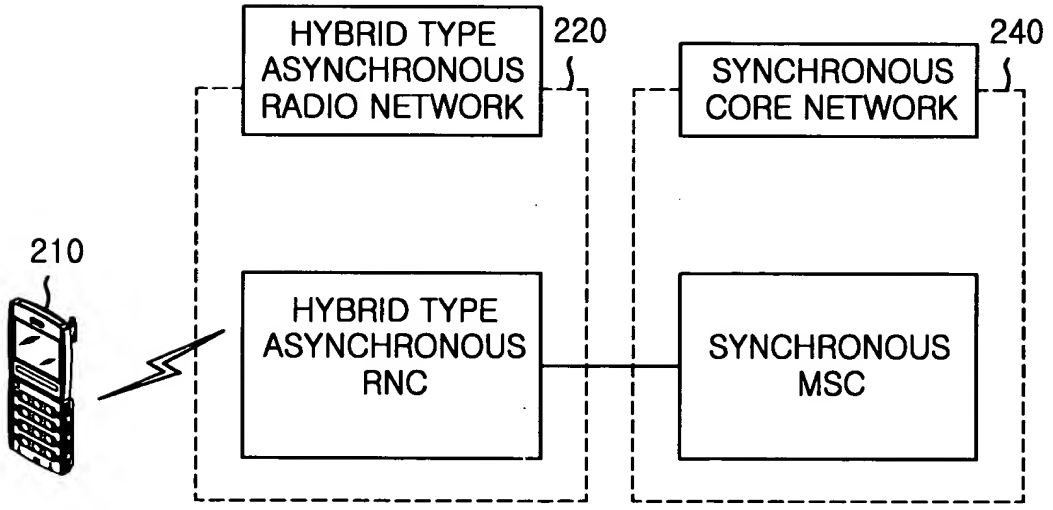
HYBRID TYPE ASYNCHRONOUS RADIO NETWORK
220
SYNCHRONOUS CORE NETWORK
240
210
HYBRID TYPE ASYNCHRONOUS RNC
SYNCHRONOUS MSC

FIG. 4A

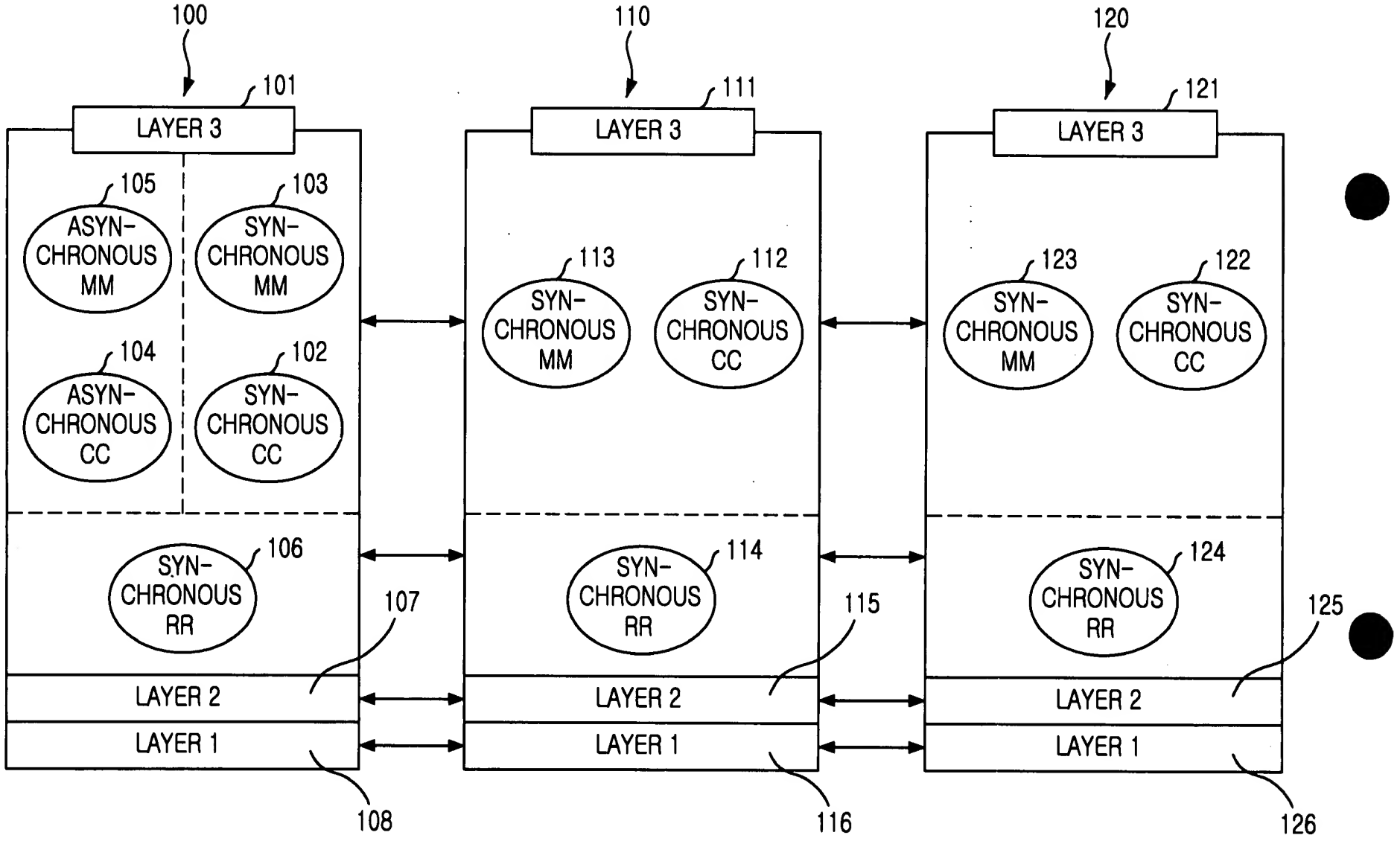
100
101
LAYER 3
105
ASYN-CHRONOUS MM
103
SYN-CHRONOUS MM
104
ASYN-CHRONOUS CC
102
SYN-CHRONOUS CC
106
SYN-CHRONOUS RR
107
LAYER 2
LAYER 1
108
110
111
LAYER 3
113
SYN-CHRONOUS MM
112
SYN-CHRONOUS CC
114
SYN-CHRONOUS RR
115
LAYER 2
LAYER 1
116
120
121
LAYER 3
123
SYN-CHRONOUS MM
122
SYN-CHRONOUS CC
124
SYN-CHRONOUS RR
125
LAYER 2
LAYER 1
126

FIG. 4B

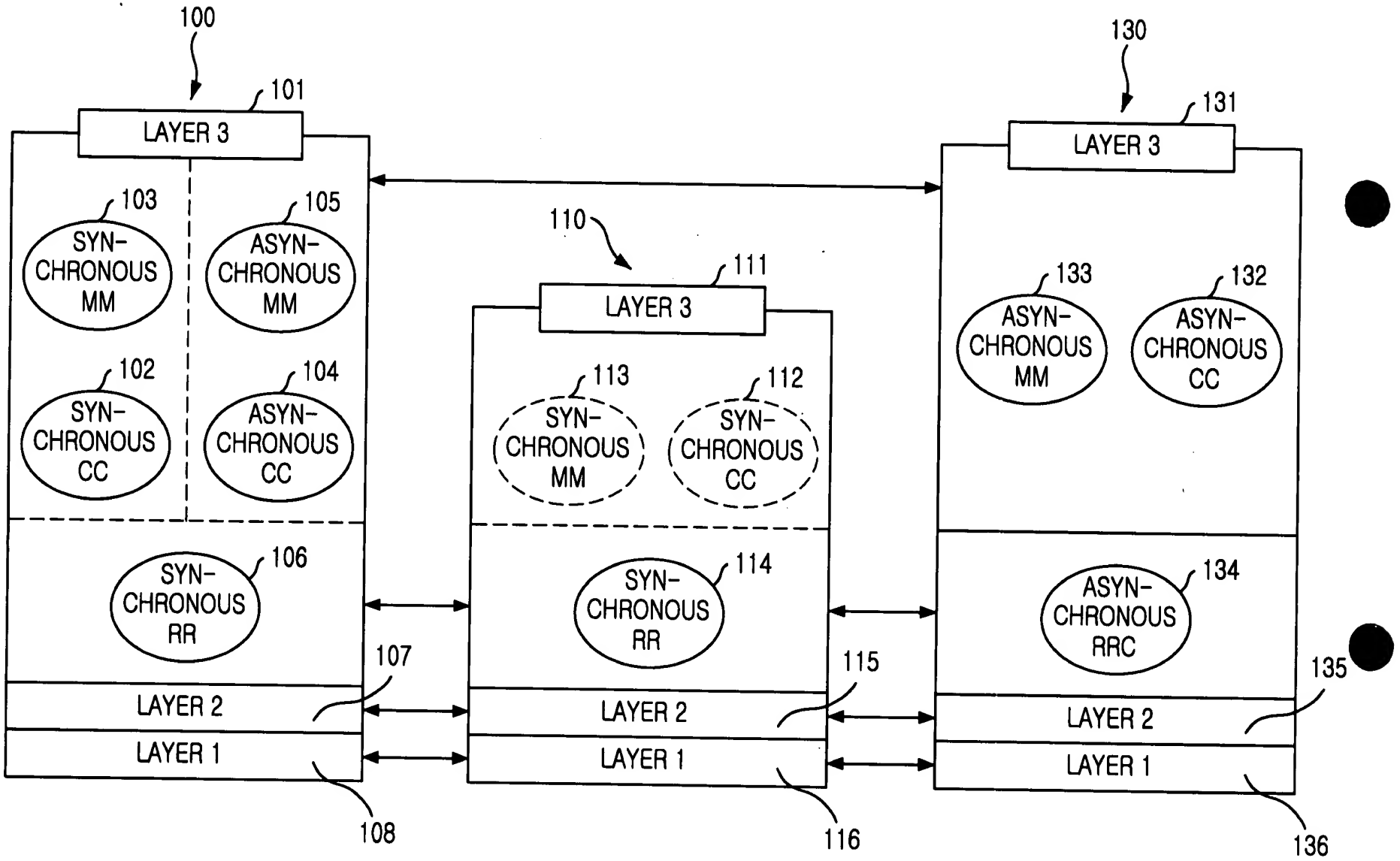
100
101
LAYER 3
103
SYN-CHRONOUS MM
105
ASYN-CHRONOUS MM
102
SYN-CHRONOUS CC
104
ASYN-CHRONOUS CC
106
SYN-CHRONOUS RR
107
LAYER 2
LAYER 1
108
110
111
LAYER 3
113
SYN-CHRONOUS MM
112
SYN-CHRONOUS CC
114
SYN-CHRONOUS RR
115
LAYER 2
LAYER 1
116
130
131
LAYER 3
133
ASYN-CHRONOUS MM
132
ASYN-CHRONOUS CC
134
ASYN-CHRONOUS RRC
135
LAYER 2
LAYER 1
136

FIG. 4C

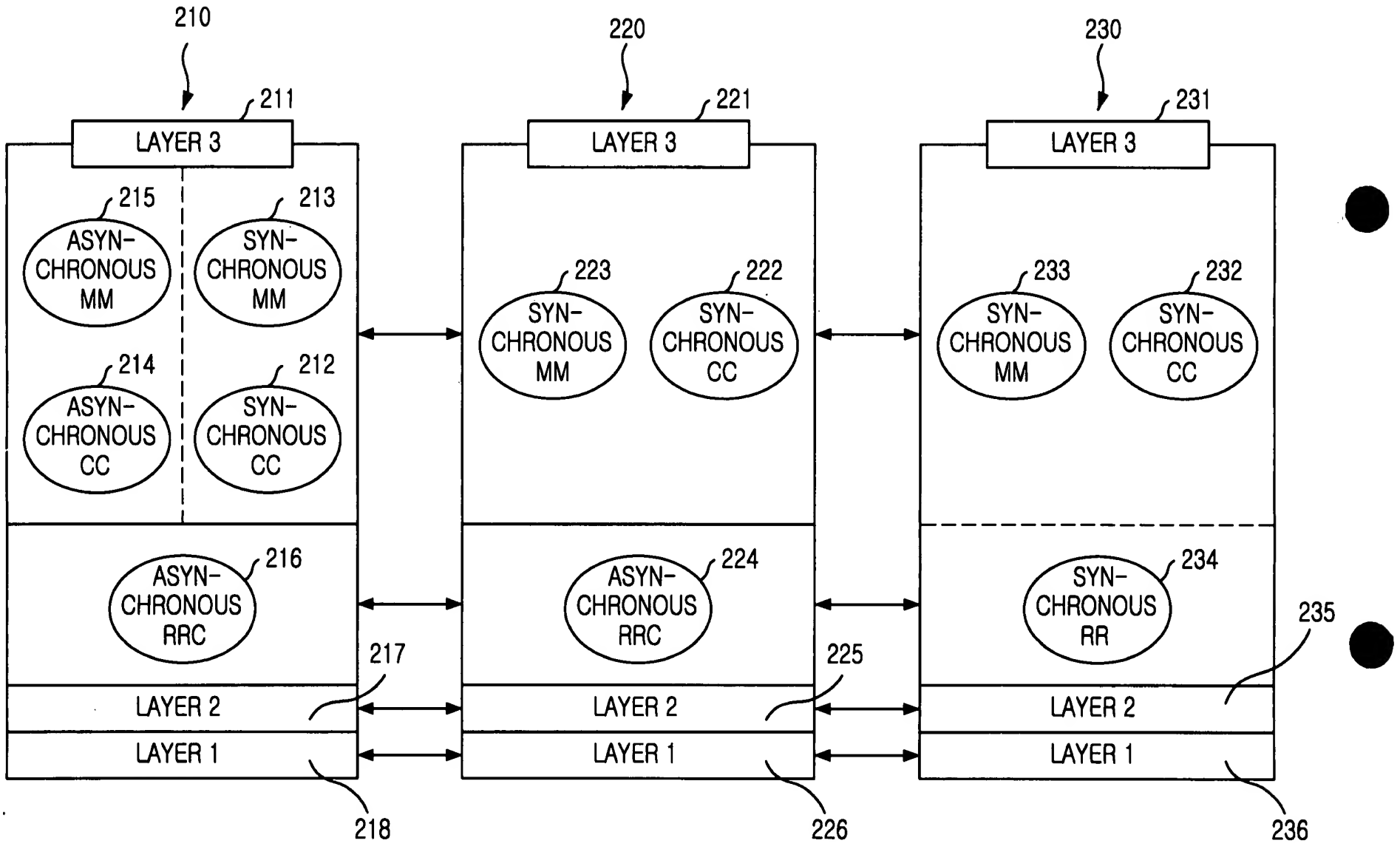
210
211
LAYER 3
215
ASYN-CHRONOUS MM
213
SYN-CHRONOUS MM
214
ASYN-CHRONOUS CC
212
SYN-CHRONOUS CC
216
ASYN-CHRONOUS RRC
217
LAYER 2
LAYER 1
218
220
221
LAYER 3
223
SYN-CHRONOUS MM
222
SYN-CHRONOUS CC
224
ASYN-CHRONOUS RRC
225
LAYER 2
LAYER 1
226
230
231
LAYER 3
233
SYN-CHRONOUS MM
232
SYN-CHRONOUS CC
234
SYN-CHRONOUS RR
235
LAYER 2
LAYER 1
236

FIG. 4D

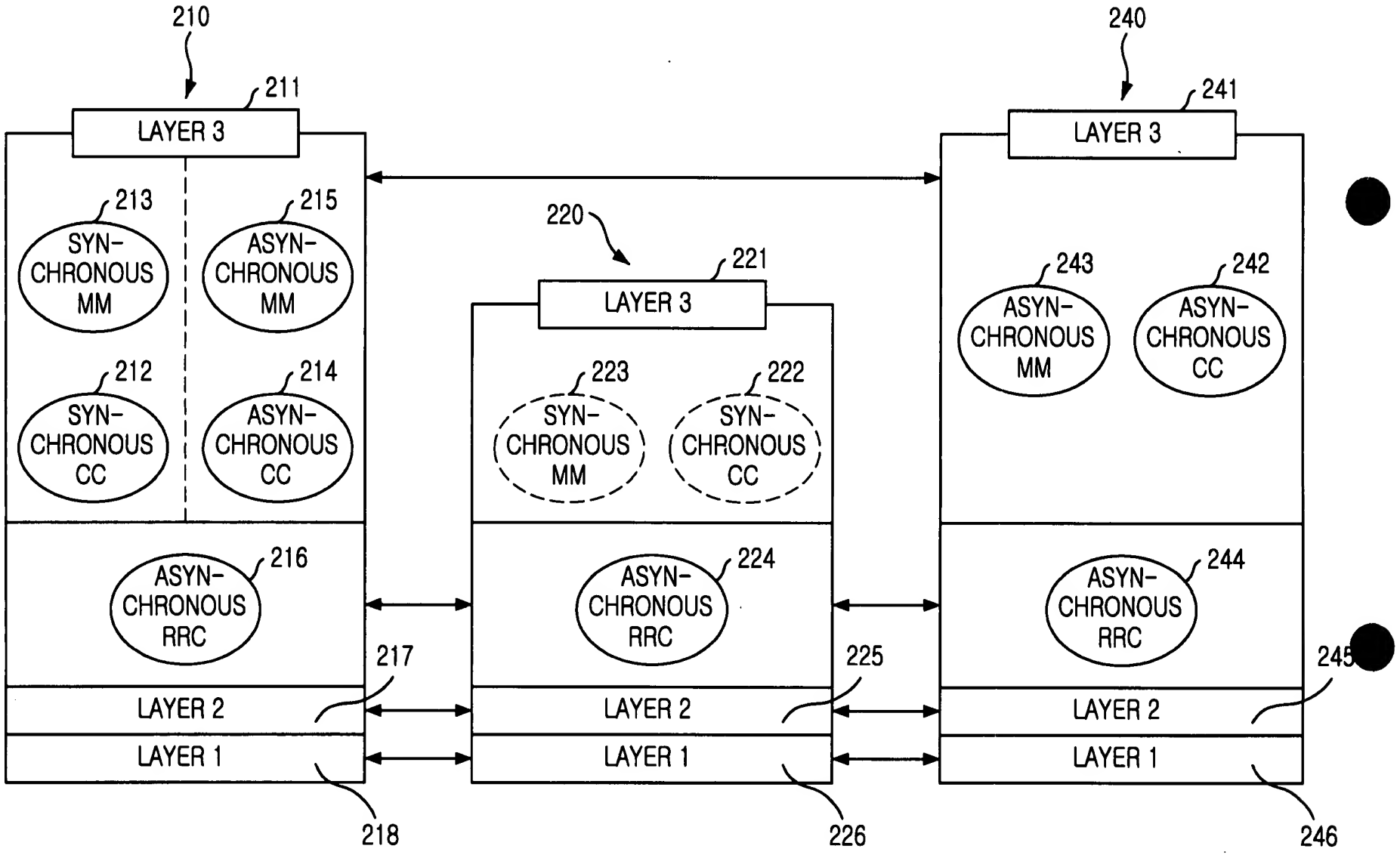
210
211
LAYER 3
213
SYN-CHRONOUS MM
215
ASYN-CHRONOUS MM
212
SYN-CHRONOUS CC
214
ASYN-CHRONOUS CC
216
ASYN-CHRONOUS RRC
217
LAYER 2
LAYER 1
218
220
221
LAYER 3
223
SYN-CHRONOUS MM
222
SYN-CHRONOUS CC
224
ASYN-CHRONOUS RRC
225
LAYER 2
LAYER 1
226
240
241
LAYER 3
243
ASYN-CHRONOUS MM
242
ASYN-CHRONOUS CC
244
ASYN-CHRONOUS RRC
245
LAYER 2
LAYER 1
246

FIG. 5

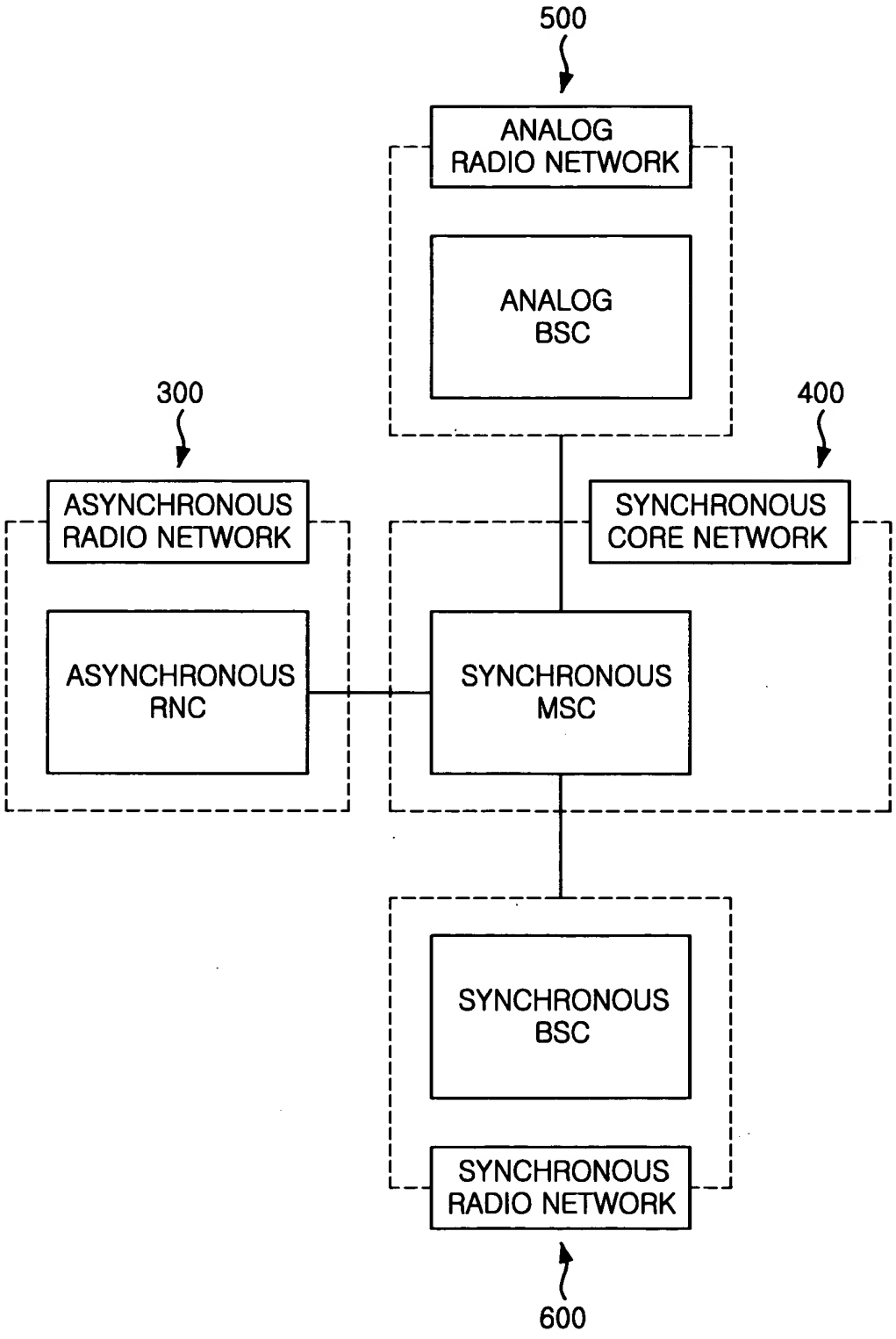
500
ANALOG RADIO NETWORK
ANALOG BSC
300
400
ASYNCHRONOUS RADIO NETWORK
SYNCHRONOUS CORE NETWORK
ASYNCHRONOUS RNC
SYNCHRONOUS MSC
SYNCHRONOUS BSC
SYNCHRONOUS RADIO NETWORK
600

FIG. 6

INFORMATION ELEMENT	PRESENCE	MULTI	IE TYPE AND REFERENCE	SEMANTICS DESCRIPTION
MESSAGE TYPE	M			
UE INFORMATION ELEMENTS				
INTEGRITY CHECK INFO	O			
ACTIVATION TIME	O			
OTHER INFORMATION ELEMENTS				
INTER-SYSTEM MESSAGE	M			

FIG. 7

INFORMATION ELEMENT/ GROUP NAME	PRESENCE	RANGE	IE TYPE AND REFERENCE	SEMANTICS DESCRIPTION
SYSTEM TYPE	M		ENUMERATED (GSM, 1..15)	
MESSAGE(S)	M	1..<MAXINTERSYSMESSAGES>	BITSTRING (1..512)	FORMATTED AND CODED ACCORDING TO SPECIFICATION FOR THE INDICATED SYSTEM TYPE SEE NOTE 1

RANGE BOUND	EXPLANATION
MAXINTERSYSMESSAGES(=4)	MAXIMUM NUMBER OF INTER SYSTEM MESSAGES TO SEND

NOTE 1: FOR INTER-SYSTEM HANDOVERS TO IS 2000 SYSTEM, THIS FIELD SHALL CONSIST OF THE UNIVERSAL HANDOFF DIRECTION MESSAGE, DESCRIBED IN SECTION 3.7.3.3.2.36 OF TIA/EIA IS-2000.5

FIG. 8

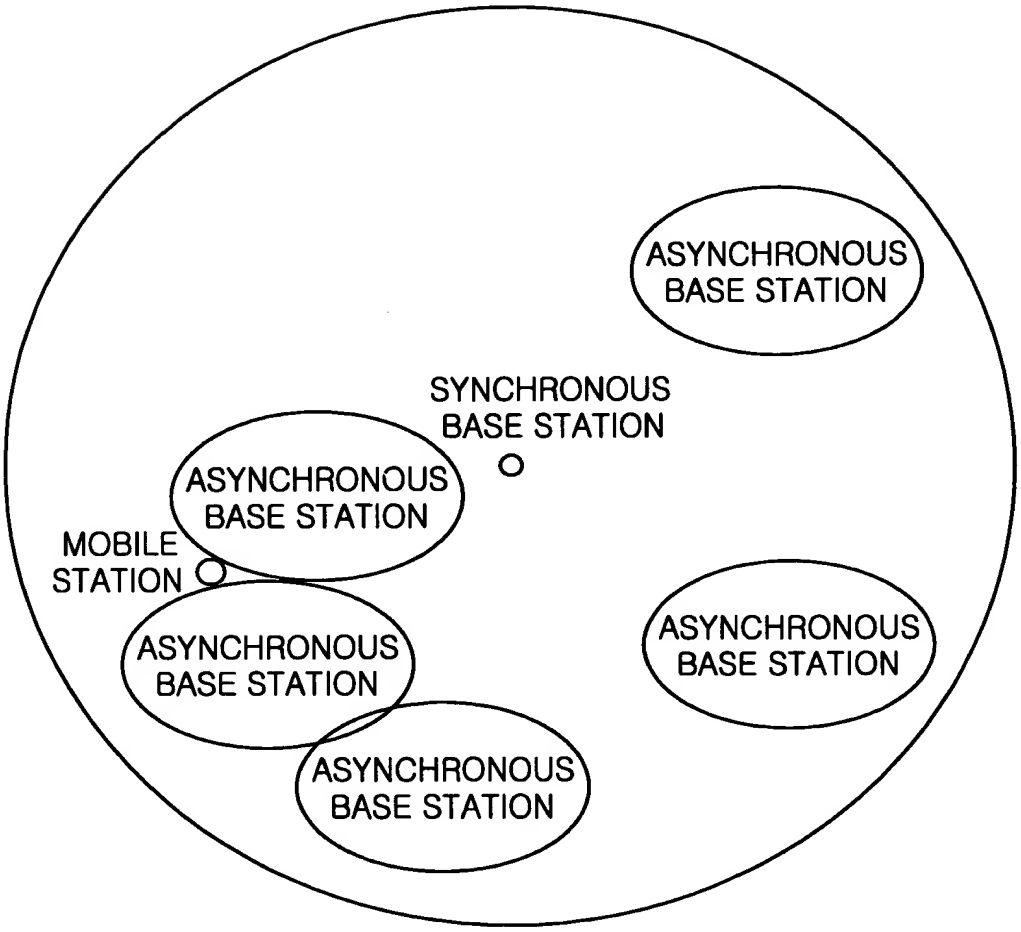

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FIG. 9A

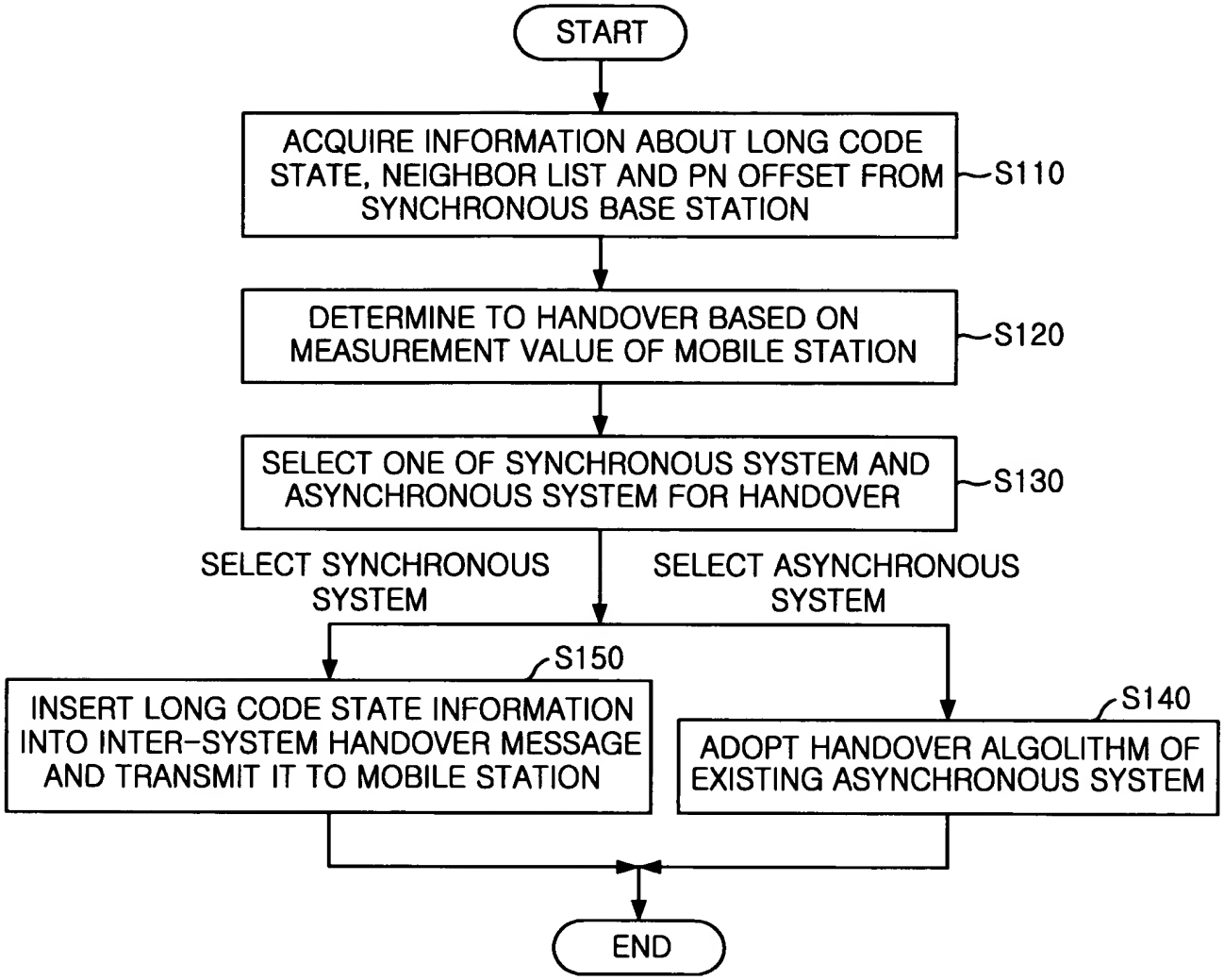
START
ACQUIRE INFORMATION ABOUT LONG CODE STATE, NEIGHBOR LIST AND PN OFFSET FROM SYNCHRONOUS BASE STATION
S110
DETERMINE TO HANDOVER BASED ON MEASUREMENT VALUE OF MOBILE STATION
S120
SELECT ONE OF SYNCHRONOUS SYSTEM AND ASYNCHRONOUS SYSTEM FOR HANDOVER
S130
SELECT SYNCHRONOUS SYSTEM
SELECT ASYNCHRONOUS SYSTEM
S150
INSERT LONG CODE STATE INFORMATION INTO INTER-SYSTEM HANDOVER MESSAGE AND TRANSMIT IT TO MOBILE STATION
S140
ADOPT HANDOVER ALGOLITHM OF EXISTING ASYNCHRONOUS SYSTEM
END

FIG. 9B

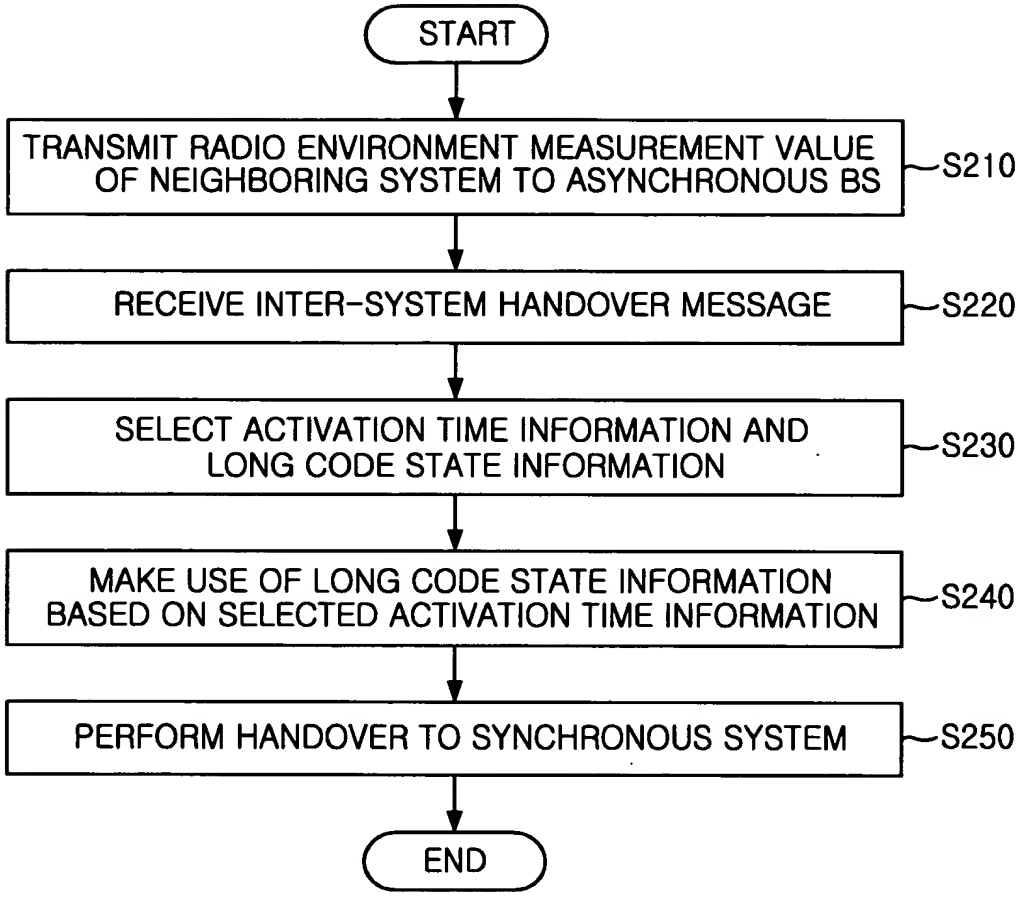

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FIG. 10A

INFORMATION ELEMENT/ GROUP NAME	PRESENCE	RANGE	IE TYPE AND REFERENCE	SEMANTICS DESCRIPTION
SYSTEM TYPE	M		ENUMERATED (GSM, 1..15)	
MESSAGE(S)	M	1..<MAXINTERSYSMESSAGES>	BITSTRING (1..512)	FORMATTED AND CODED ACCORDING TO SPECIFICATION FOR THE INDICATED SYSTEM TYPE SEE NOTE 1, NOTE 2

RANGE BOUND	EXPLANATION
MAXINTERSYSMESSAGES(=4)	MAXIMUM NUMBER OF INTER SYSTEM MESSAGES TO SEND

NOTE 1: FOR INTER-SYSTEM HANDOVERS TO IS 2000 SYSTEM, THIS FIELD SHALL CONSIST OF THE UNIVERSAL HANDOFF DIRECTION MESSAGE, DESCRIBED IN SECTION 3.7.3.3.2.36 OF TIA/EIA IS-2000.5

NOTE 2: FOR INTER-SYSTEM HANDOVERS TO IS 2000 SYSTEM, THIS FIELD SHALL CONSIST OF LONG CODE STATE DESCRIBED IN SECTION 3.7.2.3.2.6 OF TIA/EIA IS-2000.5

FIG. 10B

INFORMATION ELEMENT/ GROUP NAME	PRESENCE	RANGE	IE TYPE AND REFERENCE	SEMANTICS DESCRIPTION
SYSTEM TYPE	M		ENUMERATED (GSM, 1..15)	
CHOICE SYSTEM				
IS2000				
MESSAGE(S)	M	1..<MAXINTERSYSMESSAGES>	BITSTRING (1..512)	FORMATTED AND CODED ACCORDING TO SPECIFICATION FOR THE INDICATED SYSTEM TYPE AND CONDITION. SEE NOTE 1
LC_STATE			BITSTRING (1..42)	FORMATTED AND CODED ACCORDING TO SPECIFICATION FOR THE INDICATED SYSTEM TYPE AND CONDITION. SEE NOTE 1

RANGE BOUND	EXPLANATION
MAXINTERSYSMESSAGES(=4)	MAXIMUM NUMBER OF INTER SYSTEM MESSAGES TO SEND

CHOICE SYSTEM	CONDITION UNDER WHICH THE GIVEN SYSTEM IS CHOSEN
IS-2000	USED WHEN THE TARGET SYSTEM IS IS-2000

NOTE 1: FOR INTER-SYSTEM HANDOVERS TO IS 2000 SYSTEM, THIS FIELD SHALL CONSIST OF THE UNIVERSAL HANDOFF DIRECTION MESSAGE, DESCRIBED IN SECTION 3.7.3.3.2.36 OF TIA/EIA IS-2000.5

NOTE 2: FOR INTER-SYSTEM HANDOVERS TO IS 2000 SYSTEM, THIS FIELD SHALL CONSIST OF LONG CODE STATE DESCRIBED IN SECTION 3.7.2.3.2.6 OF TIA/EIA IS-2000.5

FIG. 11

INFORMATION ELEMENT/ GROUP NAME	PRESENCE	RANGE	IE TYPE AND REFERENCE	SEMANTICS DESCRIPTION
ACTIVATION TIME			INTEGER(0..255)	CFN [TS 25.402]

FIG. 12A

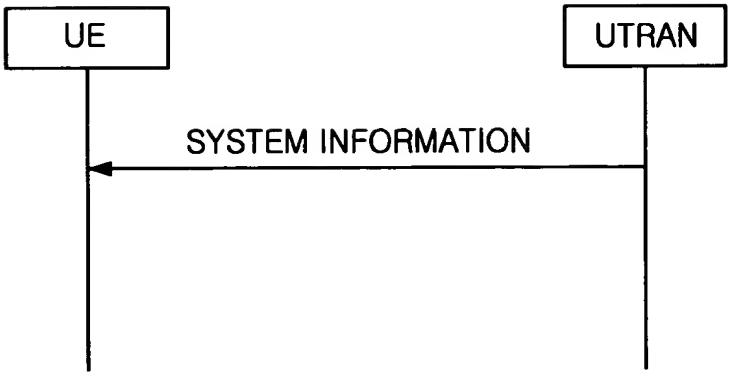

FIG. 12B

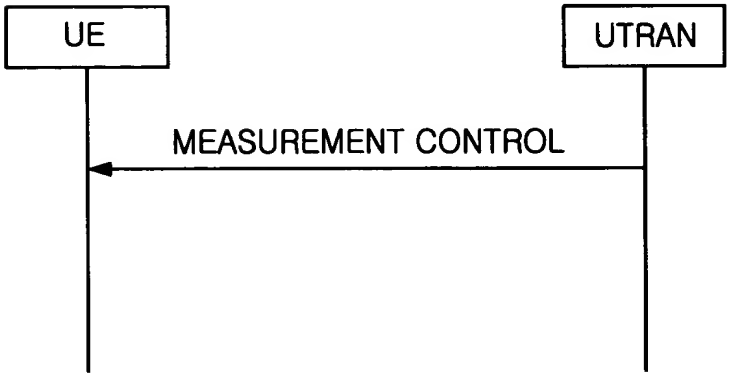

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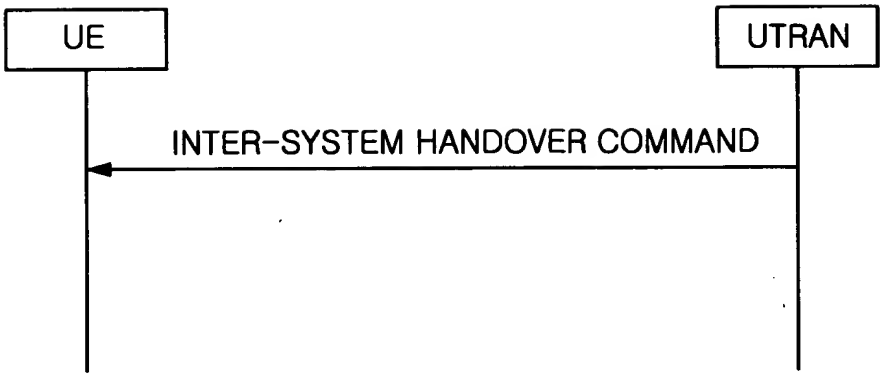
FIG. 12C



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